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Understanding the Determinants of Single-family Residential Redevelopment in the Inner-ring Suburbs of Chicago

By Suzanne Lanyi Charles

While a great deal of attention has been focused on real estate redevelopment in U.S cities, until now little research has been done on the trend of redevelopment in suburban neighborhoods through "teardowns," the process in which older single-family houses are demolished and replaced with larger, more expensive single-family houses. Suzanne Lanyi Charles' in-depth examination of suburban redevelopment in Chicago's inner-ring suburbs, published recently in Urban Studies, sheds new light on this phenomenon.

Suburban Chicago's Teardown Phenomenon

"Understanding the Determinants of Single-family Residential Redevelopment in the Inner-ring Suburbs of Chicago" examines single-family residential redevelopment in 128 older, inner-ring suburbs immediately surrounding the city of Chicago, Illinois. Charles focused on the Chicago suburbs for her study because teardowns are particularly widespread in this area, prompting The National Trust for Historical Preservation to label the Chicago metropolitan area "the epicenter of teardowns" in 2002. The National Trust identified over 50 Chicago suburbs with high rates of housing redevelopment. Charles selected the decade from 2000 to 2010 as the focus of the study because it's characterized by unprecedented property appreciation and redevelopment activity, during which teardowns began to appear in more geographically and socio-economically diverse areas than they had in the past. The research Charles has published in Urban Studies identifies the determinants of single-family residential redevelopment considering the physical and locational characteristics of residential properties, as well as the socioeconomic characteristics of the neighborhoods and districts where property is located. The paper's research findings underscore the contrast between the drivers of suburban and urban redevelopment.

What Drives Suburban Redevelopment?

The redevelopment and renovation, or "gentrification," of housing in central city neighborhoods is often considered to be driven by people seeking proximity to culture institutions and entertainment, vintage architecture and culturally diverse urban neighborhoods. The factors driving suburban redevelopment are quite different, since suburban neighborhoods are often located farther from the central city entertainment and cultural attractions, lack socio-economic diversity, and contain neighborhoods of homogeneous post-war housing. Since the urban areas in which redevelopment occurs are often occupied by lower-income households,

The REAI is an interfaculty, interdisciplinary program focused on real estate and urban development research and education at Harvard University. Periodic research briefs document the REAI-funded research work of Harvard faculty and students.

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Dr. Charles's research has received several honors including a Doctoral Dissertation Research Grant from the U.S. Department of Housing and Urban Development and research grants from the Real Estate Academic Initiative at Harvard University. She was the John R. Meyer Fellow at the Joint Center for Housing Studies, Harvard's center for scholarly research on housing issues.

Prior to joining the faculty at Northeastern University, Dr. Charles held an appointment an Assistant Professor of Urban Planning at the University of Michigan Taubman College of Architecture and Urban Planning and served as a Lecturer in Urban Planning and Design at the Harvard Graduate School of Design (GSD). A licensed architect and a LEED Accredited Professional, she has worked as an architect at the Renzo Piano Building Workshop in Paris, France and as a Vice President at Booth Hansen Architects in Chicago. She received her doctorate in urban planning from the Harvard GSD.

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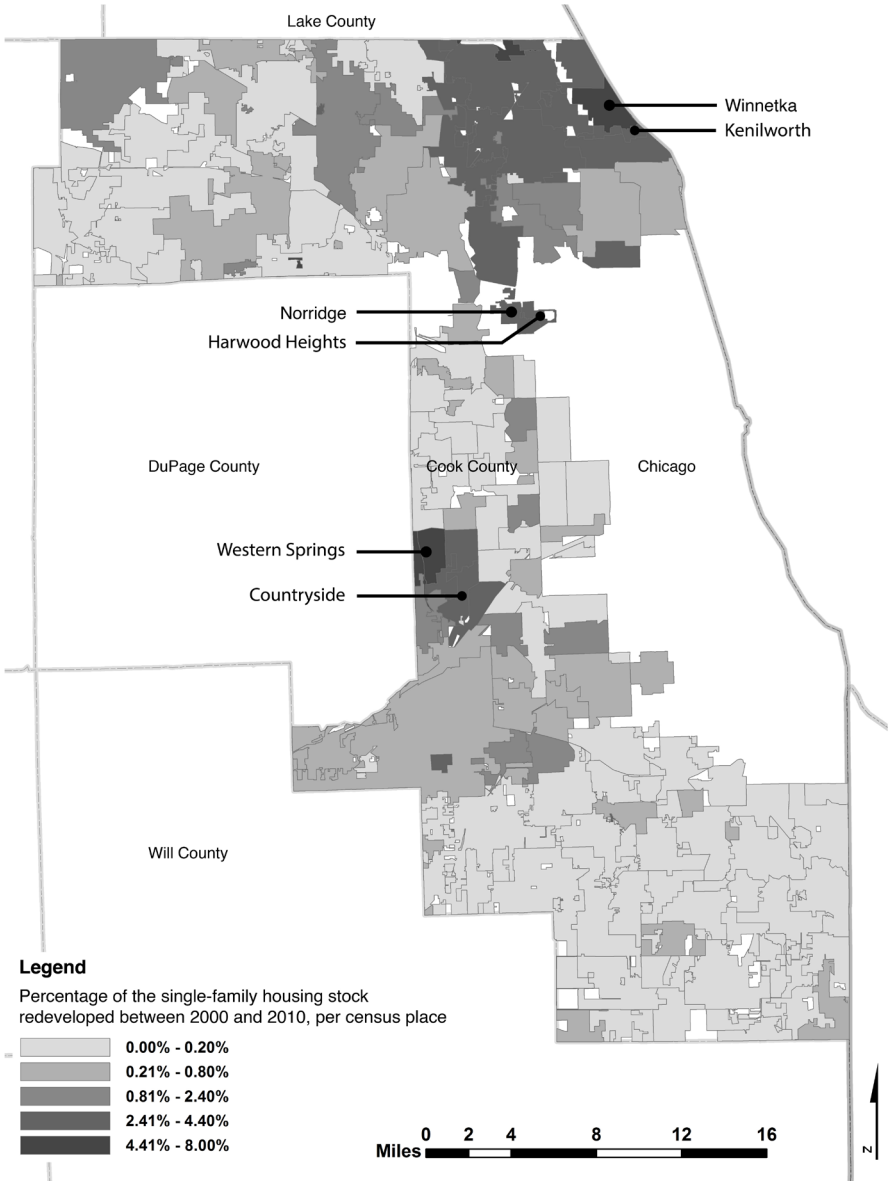
the inevitable inflation of real estate prices typically drives out these households, changing the socio-economic characteristics of these city neighborhoods. Lower income households are effectively driven out of their neighborhoods and replaced by a wealthier and often less racially diverse demographic of young singles or married couples without children. This is an ironic consequence, considering that the people who relocate to urban centers are typically attracted to their racial and ethnic diversity, along with the architecturally distinctive housing. Like central city redevelopment, teardowns have the potential to dramatically transform the physical form of suburban neighborhood housing and may push out established residents who can no longer afford to live there once real estate prices or property taxes increase.

The redevelopment patterns in Chicago's suburbs indicate that residential redevelopment occurs in many different types of suburbs across a broad spectrum of property values, household incomes, and resident occupation. In the northern suburbs of Cook County, for example, significant redevelopment occurred in suburban neighborhoods with high median household incomes and property values, including Winnetka, Kenilworth and Western Springs (Table 1). Yet Charles' research shows that suburban neighborhoods with moderate household income and property values, such as Norridge, Harwood Heights and Countryside also saw high rates of teardowns.

Table 1



Housing developers typically redevelop houses when the "rent gap"[1] between the return on the house's original development and that of its most profitable use is large enough to make redevelopment of the property financially profitable. Charles finds several explanations for suburban redevelopment that are similar to those influencing urban redevelopment; however, the study highlights several unique consumer preferences for redeveloped suburban houses. Similar to central city redevelopment, factors that made properties in Chicago's suburbs more likely to be redeveloped were smaller house size, lower floor-area to lot-size ratios, and lower value compared to other properties in the neighborhood. Houses located relatively close to the central business district and with easy access to commuter rail stations and highway access were also attractive candidates for teardown. Houses built of masonry and with features such as finished basements were less likely to be redeveloped, and median property values of neighborhoods did not have

1 Smith, N. (1979). Toward a theory of gentrification: a back to the city movement by capital, not people. Journal of the American Planning Association, 45, 538-548.

Table 2

Description	Units	Measure-ment Level	All Parcels Mean	All Parcels SD	Nonredeveloped Parcels Mean	Nonredeveloped Parcels SD	Redeveloped Parcels Mean	Redeveloped Parcels SD
Housing Characteristic Variables								
House constructed between 1945 and 1970	0, 1	i	0.539	0.498	0.538	0.499	0.640	0.480
House constructed after 1970	0, 1	i	0.276	0.447	0.278	0.448	0.013	0.114
Log of house size	sq. ft.	i	7.241	0.372	7.241	0.372	7.202	0.402
Log of floor area ratio	%	i	-1.630	0.581	-1.628	0.580	-1.987	0.563
Ratio of parcel value to the U.S. Census tract average	%	i	1.018	0.324	1.019	0.324	0.894	0.298
Masonry construction	0, 1	i	0.319	0.466	0.319	0.466	0.285	0.452
Finished basement	0, 1	i	0.322	0.467	0.323	0.468	0.210	0.407
Central air conditioning	0, 1	i	0.458	0.498	0.459	0.498	0.330	0.470
One-car garage	0, 1	i	0.244	0.429	0.243	0.429	0.371	0.483
Distance to the nearest commuter rail station	mi.	i	1.547	1.083	1.551	1.084	1.093	0.694
Distance to the nearest expressway access point	mi.	i	1.922	1.204	1.924	1.205	1.609	0.922
Distance to State/Madison streets (CBD)	mi.	i	18.235	6.227	18.253	6.235	15.724	4.165
Neighborhood Socio-economic Variables								
Median property value (2000)	$1,000	j	190.5	110.5	189.5	108.9	331.9	202.2
Percent Black residents (2000)	%	j	14.666	25.737	14.755	25.798	2.038	7.261
Percent Hispanic residents (2000)	%	j	9.921	13.179	9.960	13.210	4.396	5.412
Percent change in the median property value (1990-2000)	%	j	48.404	18.531	48.358	18.546	54.899	14.908
Percent change in the median family income (1989-1999)	%	j	38.565	17.229	38.540	17.251	42.094	13.283
Change in the percentage of Black residents (1990-2000)	%	j	5.268	10.682	5.300	10.710	0.703	2.573
District Variables								
Average ISAT test score above 90	0, 1	k	0.084	0.277	0.082	0.274	0.416	0.493
Average nominal property tax rate	%	k	9.238	2.257	9.250	2.259	7.580	1.047
Total Observations			560,310		556,386		3,924	

a large effect in whether housing was redeveloped (Table 2, Table 3).

The Factor of School Choice in Suburban Housing Selection

Charles finds that while the people who move into redeveloped housing in lower income urban areas may not consider school quality as a crucial factor in their housing choice, it is an important criterion for households that choose to move into redeveloped suburban housing. School district quality is a factor not previously examined in studies of central city redevelopment, and Charles finds it to be a significant element in determining whether housing in suburban neighborhoods will be redeveloped (Table 2, Table 3). One of the more striking findings of Charles' research is the racial implication of suburban redevelopment trends, and the extent to which race and ethnicity are significant predictors of whether houses in inner-ring suburbs will be redeveloped. Charles' study revealed that not only are houses in municipalities with greater proportions of Black and Hispanic residents less likely to be redeveloped, but when the percentage of Black residents living in an area increased between 1990 and 2000, houses in these suburban neighborhoods were also less likely to be torn down and replaced with more expensive housing (Table 2, Table 3). Racial bias may be a factor affecting both where real estate developers choose to redevelop houses, and where potential home buyers decide to buy new, upgraded suburban housing.

Who – and What – Gets Displaced by Suburban Redevelopment?

Since suburban teardowns typically replace modest sized, mid-priced or affordable housing stock, existing residents may be displaced because they can't afford the new, more expensive houses. Particularly for renters within a suburban municipality seeking to buy their first single-family house, families who want to relocate within the village, or retirees who can't afford increased property tax rates, the teardown phenomenon can be a serious burden. Moreover, when historically or architecturally significant properties are destroyed to make way for current popular housing sizes and styles, a suburban municipality may lose its cultural and historical integrity.

Table 3

Variable	*Model 1*	*Model 2*	*Model 3*	*Odds Ratio Model 3*
House constructed between 1945 and 1970	-0.047	-0.065	-0.123	0.884
	(0.121)	(0.083)	(0.099)	
House constructed after 1970	-2.323 * * *	-2.198 * * *	-2.144 * * *	0.117
	(0.240)	(0.269)	(0.260)	
Log of house size	1.855 * * *	-0.504 * *	-0.484 * *	0.616
	(0.298)	(0.204)	(0.219)	
Log of floor area ratio	-1.533 * * *	-1.043 * * *	-1.025 * * *	0.359
	(0.129)	(0.116)	(0.121)	
Ratio of parcel value to the U.S. Census tract average	-2.581 * * *	-0.566 * * *	-0.564 * *	0.569
	(0.254)	(0.211)	(0.228)	
Masonry construction	-0.290 * * *	-0.315 * * *	-0.318 * * *	0.727
	(0.097)	(0.082)	(0.087)	
Finished basement	-0.261 * *	-0.492 * * *	-0.491 * * *	0.612
	(0.118)	(0.114)	(0.111)	
Central air conditioning	0.139 * *	-0.066	-0.073	0.929
	(0.060)	(0.047)	(0.047)	
One-car garage	0.403 * * *	0.239 * * *	0.231 * * *	1.260
	(0.049)	(0.048)	(0.050)	
Distance to the nearest commuter rail station	-0.522 * * *	-0.242 *	-0.298 * * *	0.742
	(0.165)	(0.124)	(0.111)	
Distance to the nearest expressway access point	-0.290 * * *	-0.341 * * *	-0.200 * * *	0.818
	(0.093)	(0.079)	(0.061)	
Distance to State/Madison streets (CBD)	-0.111 * * *	-0.098 * * *	-0.102 * * *	0.903
	(0.037)	(0.037)	(0.027)	
Median property value (2000)		0.003 * * *	0.001 *	1.001
		(0.000)	(0.001)	
Percent black residents (2000)		-0.041 * * *	-0.022 * * *	0.978
		(0.008)	(0.006)	
Percent Hispanic residents (2000)		-0.092 * * *	-0.074 * * *	0.929
		(0.015)	(0.011)	
Percent change in the median property value (1990-2000)		-0.001	0.003	1.003
		(0.005)	(0.004)	
Percent change in the median family income (1989-1999)		-0.002	-0.007 *	0.993
		(0.005)	(0.004)	
Change in the percentage of black residents (1990-2000)		-0.058 * * *	-0.036 * *	0.965
		(0.021)	(0.018)	
Average ISAT test score above 90			0.921 * * *	2.512
			(0.287)	
Average nominal property tax rate			-0.325 * * *	0.722
			(0.074)	
Constant	-15.418 * * *	0.590	3.082 * *	0.884
	(1.901)	(1.327)	(1.488)	
Observations	560,310	560,310	560,310	
Psuedo R2 (naïve model)	0.140	0.210	0.223	

* denotes significance at 10%, ** denotes significance at 5%, *** denotes significance at 1%
Stand errors are in parenthesis below the coefficients for each variable

Yet Charles' research also found that suburban redevelopment may simply replace post-war homogenous tract housing, rather than charming vintage homes, a phenomenon that a suburban municipality may not consider objectionable. While previous studies had concluded that older houses were more likely to be redeveloped, Charles found that houses built before 1945 weren't significantly more or less likely to be redeveloped than post-war houses built between 1945 and 1970. Since suburban homeowners are more likely than urban residents of rental property to benefit from housing redevelopment, there's likely to be less resistance to housing developers razing small, modest residences in favor of "McMansion" replacements. While some households may feel the pinch of higher sale prices and property taxes, many homeowners – particularly those who want to sell and relocate – may find appeal in the redevelopment trend.

The Impacts on Affordable Housing Stock

The high rates of redevelopment across the spectrum of real estate prices and household income, with teardowns prevalent in affluent as well as more modest suburban neighborhoods, may impact housing affordability. As modest-sized houses are torn down and replaced by larger and more expensive houses, households that might otherwise have been financially able to purchase the original house may no longer be able to afford it. When houses are redeveloped in areas that are already affluent, they remove relatively less expensive housing stock; when teardowns occur in modest neighborhoods, they potentially lead to neighborhood-wide increases in property values.

Charles' ongoing research reveals that the locations of teardowns seemed to shift over the course of the decade she studied, beginning in neighborhoods with high property values, then moving into lower-income areas. This shift, however, was not a result of redevelopment stopping or slowing in more affluent areas because of new zoning regulations or restrictions, thereby pushing the development trend into more modestly priced neighborhoods. On the contrary, redevelopment continued and even accelerated in the more expensive municipalities, while simultaneously expanding into less affluent neighborhoods. While the research is not yet conclusive, these patterns suggest that relaxed underwriting standards and the expansion of the secondary mortgage market in the 2000s led to less risk-averse lending than in previous decades, prompting developers to chase "rent-gaps" into financially riskier neighborhoods, including less affluent inner-ring suburbs. As a result, some of the redevelopments in these neighborhoods during the second half of the decade failed financially and were abandoned during construction, with potentially negative consequences for the villages' housing stock.

Broader Implications of Suburban Teardowns

There are broader implications of the suburban teardown phenomenon for the real estate market, urban planners, and real estate developers across the country. Chicago's inner-ring suburbs reflect suburban redevelopment in the inner-ring suburbs surrounding many U.S. cities. During the previous decade's housing boom, municipalities' responses were varied. Some enacted policies to control teardowns, some actively encouraged it, and yet others adopted a laissez faire approach. The study uncovers the underlying logic of the suburban teardown process that may help suburban policy-makers to better anticipate teardown activity and to better prepare an effective response. Beyond the economic implications of Charles' study, her ongoing research addresses larger questions about what drives consumers' spending on larger and more expensive housing and the impact that suburban teardowns will have on the housing market, especially in the context of the U.S. economic recovery.

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